

REMARKS

Claims 1-20 are pending in the present application. Claims 1 and 17 are independent. Claim 20 has been added.

Claim Rejection – 35 USC 102

Claims 1, 17, and 19 have been rejected under 35 U.S.C. 102(b) as being anticipated by Kalb, Jr. (U.S. Patent 5,760,581). Applicants respectfully traverse this rejection.

The present invention is directed to a hybrid architecture of a constant current driving system and a constant voltage driving system. In particular, the present invention provides a Hall device biasing circuit based on the concept of the constant voltage driving system but wherein the Hall devices are connected in series, a characteristic in the constant current driving system. Connecting the Hall devices in series enables a fixed current consumption by the system by sharing the drive current between the devices (Specification, page 16, lines 9-13). Further, by supplying a constant bias voltage to each Hall device, the present invention is not temperature dependent, even though the Hall devices are connected in series (Specification: page 16, lines 7-9; page 17, last paragraph; page 5, lines 5-10). Still further, by biasing the drive current of each Hall device with the biasing circuit, the insufficiency and excessiveness in the driving currents for the Hall devices are counteracted (Specification, page 26, bottom paragraph).

In order to cover this architecture, claim 1 recites, “a plurality of terminals for applying a bias voltage to a plurality of Hall devices connected in series.” Applicants submit that Kalb, Jr. fails to teach this claimed architecture. In order to clarify this distinction, Applicants have amended claim 1, and similarly claim 17, to recite that, “the bias voltage applied to each of the plurality of Hall devices is substantially constant.”

As acknowledged in the Advisory Action of July 24, 2003, Kalb, Jr. teaches a reference voltage applied to the first MagFET. Based on a daisy-chain connection, later MagFET's are coupled such that they accumulate the effects of the magnetic field. The voltages of the center drains and sources of the later MagFETs are permitted to float or vary to maintain the accumulated voltage difference across the MagFETs.

At least because Kalb, Jr. teaches wherein bias voltages between later stage MagFETs are permitted to vary, Applicants submit that Kalb, Jr. fails to teach or suggest the claimed plurality of terminals for applying a bias voltage to a plurality of Hall devices connected in series, where the bias voltage applied to each of the Hall devices is substantially constant. This argument, applies as well to claims 17 and 19. Applicants respectfully request that the rejection be withdrawn.

Claim Rejection – 35 USC 103

Claims 2-12, 14, 15 and 18 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Kalb, Jr. and Foster (U.S. Patent 4,833,406). Applicants respectfully traverse this rejection. Applicants note that the heading paragraph in the rejection refers only to claims 2-11 and 14. It is assumed that this a typographical error.

Applicants submit that Foster fails to make up for the deficiency of Kalb, Jr. of failing to teach wherein the bias voltage applied to each of the Hall devices is substantially constant., in the context of a plurality of Hall devices connected in series. Rather, Foster teaches a constant voltage applied to a single Hall device. Accordingly, Applicants respectfully request that the rejection be withdrawn.

New Claim

Claim 20 has been added. The claim recites alternative language to describe a distinguishing architecture of the present invention. Applicants submit that Kalb, Jr and Foster, either alone or in combination, fail to teach or suggest at least the claimed invention of claim 20.

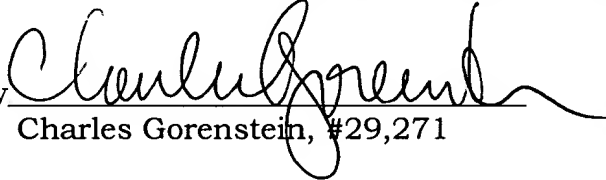
CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert W. Downs (Reg. No. 48,222) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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